PUERTO RICO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF PUERTO RICO
MAYAGUEZ, PUERTO RICO 00681

and

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Washington, D.C. 20250

NOTICE OF NAMING AND RELEASE OF MORALES, A BEAN GOLDEN MOSAIC RESISTANT SMALL WHITE BEAN CULTIVAR FOR PUERTO RICO

'Morales' small white bean (*Phaseolus vulgaris* L.) was developed by Dr. J. Beaver of the Puerto Rico Agricultural Experiment Station in cooperation with Dr. P. Miklas of the Agricultural Research Service of the United States Department of Agriculture. Morales, tested as PR9610-9, was derived from the cross 'Arroyo Loro'/'Don Silvio'. Arroyo Loro is a white-seeded cultivar with rust [caused by *Uromyces appendiculatus* (Pers.) Unger] and bean common mosaic virus (BCMV) resistance. DOR482 is the CIAT identification of the bean golden mosaic (BGMV) resistant, small red cultivar Don Silvio. Crosses, field selections and evaluations were made at the Isabela Substation in Puerto Rico. The F_1 was advanced in the field. Individual F_2 and F_3 plants were selected under field conditions for erect plant architecture, early maturity and commercially acceptable white seed type. The F_4 was screened in the field for BGMV resistance and resistant $F_{3:4}$ plants were harvested in bulk. The BGMV resistance of PR9610-9 was confirmed in the greenhouse. Morales has the recessive *bgm-1* allele for resistance to BGMV which was detected using the $R2_{570/530}$ RAPD marker. Morales represents the first release of a small white bean with BGMV resistance. Morales is resistant to the bean rust races prevalent in Puerto Rico. It also carries the *I* gene for resistance to BCMV. The performance of Morales was evaluated in 6 field trials conducted in Puerto Rico from 1995 to 1997. Seed yields of Morales were similar to the adapted white-seeded cultivar Arroyo Loro. Morales has an indeterminate bush, short-vine Type II growth habit. It is a midseason line, flowering by 35 d and maturing before 80 d after planting. Morales has a commercially acceptable white seed color and a seed weight averaging 19 g 100 seed^{-1}. Morales is suitable for the production of dry or green-shell beans. Breeder seed of Morales will be maintained by the Agricultural Experiment Station of the University of Puerto Rico and small quantities are available upon request from Dr. James Beaver, Dept. of Agronomy and Soils, Univ. of Puerto Rico, P.O. Box 9030, Mayaguez, PR 00681-9030.

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Director, Puerto Rico Agricultural Experiment Station Date

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Administrator, Agricultural Research Service Date